

## New and little known species of the butterfly genus *Hyponephele* MUSCHAMP, 1915

(Lepidoptera, Satyridae)

by

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**Summary:** *Hyponephele przhewalskyi* DUBATOLOV, SERGEEV & ZDANKO spec. nov. is described from North Tien Shan. It is closely related to *H. lycaon* KUHN and *H. lycaonoides* WEISS. The new species can be identified by the wing patterns of males and females and by the structure of the male genitalia. Little known *H. toharica* DUBATOLOV & SERGEEV from South-West Tadjikistan belongs to the group of small species of *Hyponephele* and can be identified by the wing patterns of males and females and especially by the male androconial sex-brand.

**Резюме:** *Hyponephele przhewalskyi* Dubatolov, Sergeev & Zhdanko, spec. nov. описывается из Северного Тянь-Шаня, близок к *H. lycaon* Kuhn и *H. lycaonoides* Weiss, от которых отличается как рисунком крыльев самцов и самок, так и строением гениталий самцов. Малоизвестный *H. toharica* Dubatolov & Sergeev из Юго-Западного Таджикистана принадлежит к группе мелких *Hyponephele* и отличается рисунком крыльев самцов и самок, и, особенно, формой андрокониев у самцов.

The genus *Hyponephele* MUSCHAMP includes a lot of species. The majority of them are endemic to the mountains of Middle Asia. New collections from North Tien Shan and South-West Tadjikistan allow us to describe two new species of this genus. Unfortunately, the first brief description of *H. toharica* was published early (DUBATOLOV et al., 1991) in connection with some delay in preparing this article. Holotypes and part of the paratypes are deposited in the Biological Institute (Novosibirsk), other paratypes in the Zoological Institute (St.-Petersburg).

*Hyponephele przhewalskyi* spec. nov.

Holotype ♂: Kyrgyzstan, Issyk Kul, Przhewalsk, 13.VII.1980 (DUBATOLOV).

Paratypes: 7 ♂♂, ibid., 12. – 15.VII.1980 (DUBATOLOV); 3 ♂♂, 1 ♀, Issyk Kul, Dolinka, stone semi-desert, 6.VIII.1971 (NIKOLAEV); 1 ♂, 1 ♀, Kyrgyzstan, southern coast of Issyk Kul, Dzhety-Oguz, 2100m, 28.VII.1984 (I. PLJUSTSH); 2 ♂♂, Kyrgyzstan, Kumbel Range, 1900m, 16./20.VII.1975 (V. G. МАНАТ); 1 ♂, Zailiyskij Alatau, Tau-Chilik River, Kumbulak, 10.VII.1920; 1 ♀, Kyrgyzstan, vicinity of Bishkek, rest home "Sovetskaja Kirgizija", low mountains, 19.VII.1980 (DUBATOLOV); 1 ♀, Taldy-Kurgan Distr., Karabulak site, 27.VII.1987 (N. V. MASTSHENKO).

Male. Upperside of forewing greyish-brown with blind apical ocellus (1–2 mm), sometimes with black ocellus between veins 2 and 3, smaller than apical one but sometimes of equal size. Usually there is a light-ochre area between veins 4 and 2 or 3, crossed, as a rule, by dark veins (fig. 1b). Sometimes this area envelopes the apical ocellus as a light rim. Some paratypes with the light area reduced. Cell and back part of the wing surface (up to basal part of vein 1) have long hairy dark-ochre scales. A narrow and straight androconial band between veins 1 and 4, not reaching the latter. Upperside of hindwing is uniformly dark-brown, sometimes with some darker striae of marginal fascia and some lighter submarginal fascia.

Underside of the forewing is light-ochre, usually with a narrow postdiscal band. The latter has a corner near to vein 4, deviates slightly near the inner margin to the distal side. Apical ocellus large with a single white pupil and yellowish indistinct rim. Costal fascia yellowish-grey with dark scales, slightly wider than 1 mm, evidently widening towards the apex, reaching the yellowish rim of the apical ocellus. Marginal fascia of the same colour, up to 2 mm. Its proximal edge being darker. The inner margin fascia is straw-grey, slightly crossing vein 1. Underside of hindwing yellowish-grey with black scales and the discal band is poorly developed.

Genitalia – see fig. 2.

Female (fig. 1c) superficially similar to *H. lycaon*, but the underside of the hindwing is grey or yellowish-grey.

Forewing length 20–22.5 mm in ♂♂ and 21–22.5 mm in ♀♀.

Remarks. ♂♂ of the new species can be identified by the structure of the genitalia (fig. 2): the ratio of length of gnathos branches to uncus length of the new species is essentially greater than the same ratio in *H. lycaonoides* WEISS (Zagros) (WEISS, 1978) and essentially smaller than in *H. lycaon*. The new species is closely similar to *H. lycaon* by slightly rounded forewings (*H. lycaonoides* has evidently pounded wings). At the same time the new species resembles *H. lycaonoides* in forewing colouration. Besides that, the new species is characterized by the slightly undulating outer margin of the hindwings and by the yellowish-grey colouration (with dark scales) of its underside.

*Hyponephele toharica* DUBATOLOV & SERGEEV, 1991

Izvestija Akademii Nauk Turkmenskoy SSR, Seriya biologicheskikh nauk, 1991, No. 6:45.

Holotype ♂. South-west Tadzhikistan, Tujun-Tau Range, Kafirnighan River, right side, 28 km lower Shaartuz, Lubijekor, 7.VI.1983 (SERGEEV).

Paratypes: 1 ♂, 4 ♀♀, the same data.

Male. The upperside of the forewing is light-brown and lighter near to ocelli (fig. 3a), with a greyish-brown band along the costal, outer and partly the inner margin. Both ocelli blend, the front one being larger. Narrow (up to 1 mm) straight androconial band dark-brown, starting from vein 4 and not crossing vein 1. Its back part deviating to the proximal side. The Uppersides of the hindwings are greyish-brown in the middle and basal parts, with oblique postdiscal band between veins 7 and 5. Costal edge gray up to vein 8, its outer margin dark-brown with groups of white marginal scales. Wing fringe light-gray.

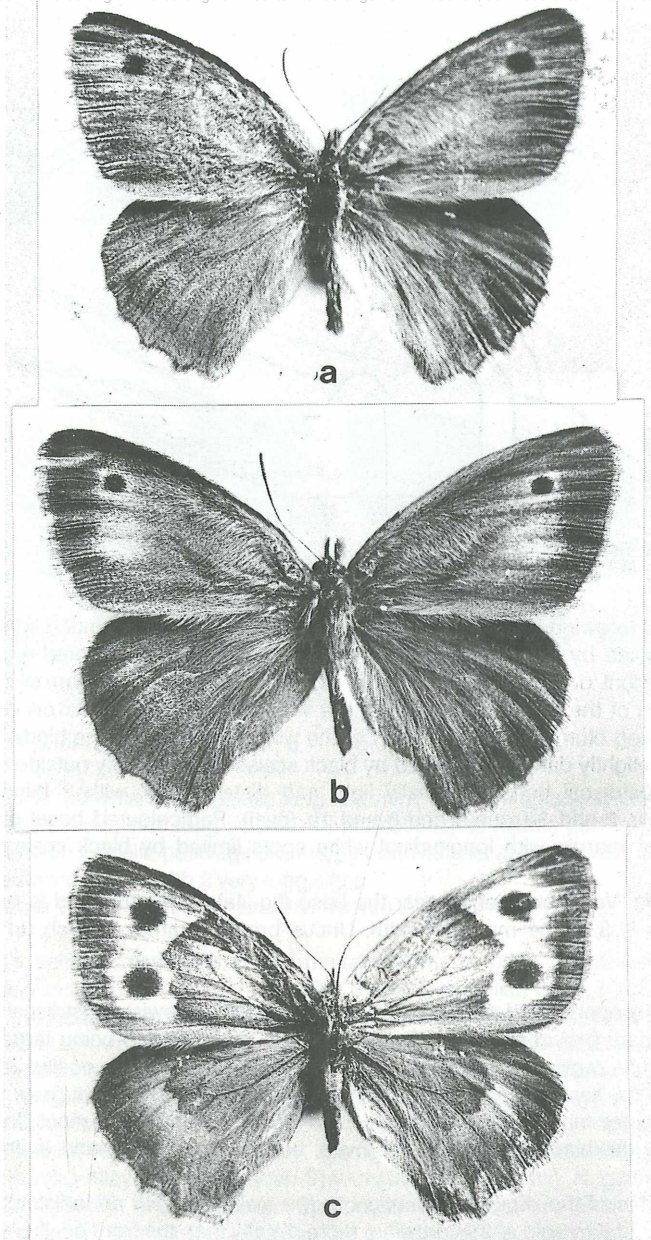


Fig. 1: *Hyponephele przhewalskyi* spec. nov.; a, b – ♂♂, c – ♀ (upperside).

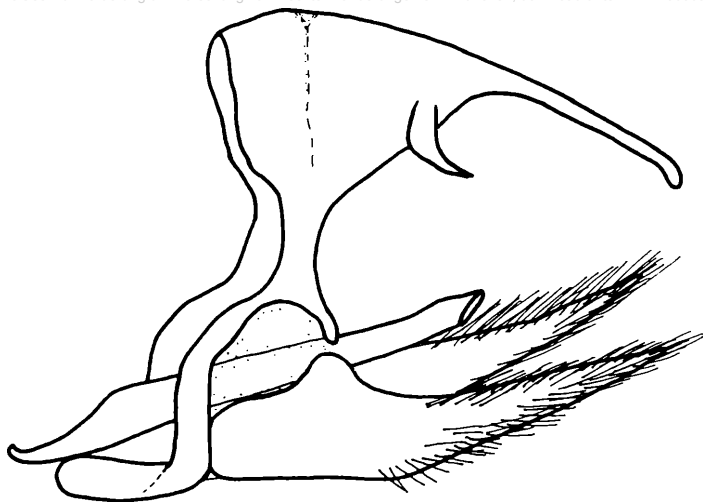


Fig. 2: Male genitalia of *Hyponephele przhewalskyi* spec. nov.

Underside of forewing (fig. 3b) with light-ochre ground colour and much lighter submarginal band, limited by black scales. The latter with 2 black ocelli centered with some white scales. The front ocellus is larger. Costal margin is light-grey and narrow (up to 1 mm). Outer margin of the same colour, but with a wider band and with narrow black crossing lines, becoming blurred in the back part of the wing. Underside of the hindwing light-gray. Discal band slightly darker and limited by black scales more definitely outside and indistinctly inside. Postdiscal band proximally light and distally dark, with 2 blind black ocelli between veins 2 and 3 (round) and 3 and 1b (oval). Particoloured basal part with black scales. Outer margin with longitudinal white spots limited by black scales. Wing fringe light.

Male genitalia. Valva broadened near the base (fig. 4a). Its narrow end is turned up. The Valva length is 3.5x the maximal width. Uncus broad, gnathos branch up to 3/4 of its length.

Female. The upperside of the forewing is brown with yellowish postdiscal band limited inside by a dark brown stripe (fig. 3c). Two ocelli, the front one being larger, and sometimes with white pupil. The rear ocellus of the allotype is small. This ocellus is in one of the paratypes of the same size as the front one. The costal margin is light grey, narrow (up to 1 mm), the outer margin brown, broad (up to 2.5 mm) with an indistinct dark stripe. The upperside of the hindwing is as in the male, but the postdiscal band is lighter than the ground colour.

The undersides of the wings are identical to the male, but with an indistinct black stroke near to the costal margin of the forewing, more distally than the front ocellus (fig. 3d).

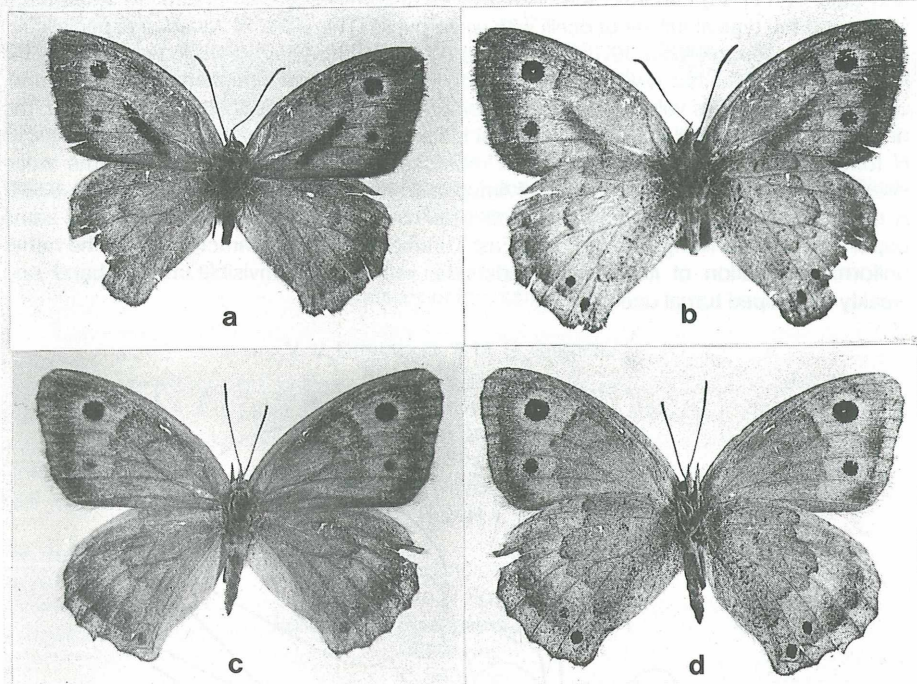


Fig. 3: *Hyponephele toharica*; a, b – ♂, c, d – ♀; a, c – upperside; b, d – underside.

Female genitalia. Lamella antevaginalis long and narrow with longitudinal folds (fig. 4b); its front part (near ostium) with long sclerotized projections; its middle part is sloping hump-formed projection. Lamella postvaginalis merges with lamella antevaginalis, small, triangle, laterally sclerotized. Bursa with 2 very long signa.

Forewing length 17–20 mm in ♂♂ and 16–18 mm in ♀♀.

Remark. This species resembles some montane forms of other species of this genus. *H. kirghisica* ALPHERAKY (North and East Tien Shan, ?Mongolian Altai), *H. cadusina* STAUDINGER (Central Kazakhstan, Altai, Tien Shan; North Pamiro-Allay – ssp. *laeta* STAUDINGER) and *H. pamira* LUKHTANOV (Pamir) all have androconial band with distinct teeth along the veins. Some others like *H. narica* HÜBNER (South-East Europe, Caucasus, Kazakhstan, Middle Asia, North-West Afghanistan, North and West Iran, East Turkey), *H. cadusia* LEDERER (Kopetdagh, West and North Iran), *H. amardea* LEDERER (Elburz, Kopetdagh, Pamiro-Allay, Afghanistan), *H. capella* CHRISTOPH (same distribution), *H. naubidensis* ERSCHOFF (Tien Shan, Pamiro-Allay), *H. haberhaueri* STAUDINGER (Pamiro-Allay), *H. germana* STAUDINGER (North Tien Shan), and *H. maureri* STAUDINGER (= *subnephele* STSHETKIN) (Pamiro-Allay) all have a dark hindwing upperside. The ♀♀ of *H. maureri* may have only an indistinct light spot, not expanding the basal part of the wing. *H. rueckbeilli* STAUDINGER (North

and East Tien Shan) can be differentiated by its uniformly coloured underside of the hindwings and the typical full set of ocelli with white pupils. Therefore, *H. toharica* especially resembles *H. pseudokirgisa* JU. JU. STSHETKIN (West Pamiro-Allay) (STSHETKIN, 1984). This little known species has a very narrow, not too long and almost straight androconial brand, which does not cross vein 1. The ground colour of the forewings is lighter in *H. toharica*, the underside of the hindwings is paler, without black spots between veins 7 and 5.

*H. toharica* has been found in the low montane semi-deserts with grass, some white species of *Artemisia* and rare shrubs of *Amygdalus bucharicus* and *Pistacia vera*.

A distinct subspecies, *H. t. karakongrada* DUBATOLOV, 1991 was described in the same paper from the Kuhitang Mts. in South-East Turkmenistan. It is characterized by the rather uniform colouration of its hindwing underside, with almost invisible medial band and weakly developed tornal ocellus.

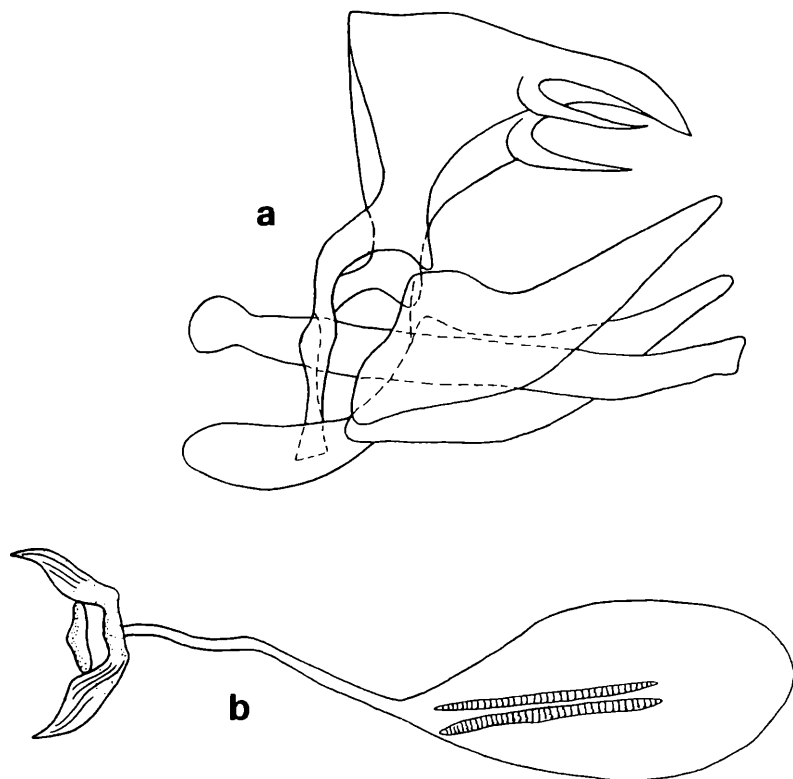


Fig. 4: Genitalia of *Hyponephele toharica*; a - ♂; b - ♀.

## References

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